
Claims

What we claim as our invention are: We claim:

~~1. The present invention is about bringing a novel function, douche mode, into the hand-held and wall-mounted showerheads for women's personal hygiene by making spiral configuration into the annular recessed cylindrical wall around the spray nozzle on the face plate of hand-held and wall-mounted showerheads to allow a coupling feature in place for screw-on connection by a disposable vaginal douche nozzle or by a flexible douche hose attachable to a disposable vaginal douche nozzle, so that the showerhead water flow path for the disposable vaginal douche nozzle shares the same water flow path with the said spray nozzle and that the spray pattern of the said spray nozzle is unaffected when a disposable vaginal douche nozzle is not screwed onto the coupling structure on the said showerhead face plate, thus resulting in a douche mode created on the showerhead.~~

1 (currently amended). A showerhead device comprising a novel function, douche mode, for women's personal hygiene through providing an engagement means around a spray nozzle nestled in the face plate of a hand-held or wall-mounted showerhead to allow a secret built-in coupling structure for thread-fit or snap-fit attachment to a disposable vaginal douche nozzle or a flexible douche hose attachable to a disposable vaginal douche nozzle, so that user can access the douche mode of a showerhead by selecting the spray mode of said spray nozzle where it has a coupling structure attachable to said douche nozzle or said flexible douche hose. Said douche nozzle or hose receives water from said spray nozzle when the douche mode on a showerhead is selected and said douche nozzle or hose from this invention is attached. The spray pattern of said spray nozzle is not affected when said douche nozzle or hose is not attached. Said douche mode is thereby built into a showerhead with a simple modification of current showerhead art without any significant change on common appearance of a showerhead face.

2. ~~The showerhead douche mode as defined in claim 1 wherein the coupling engagement between the said spray nozzle and the douche nozzle or the said douche hose may alternatively comprise~~

~~a barrel shape spray nozzle with externally threaded configuration;~~

~~an annular clearance space between the said externally threaded barrel shape spray nozzle and the annular recessed cylindrical wall to allow a douche nozzle with an internally threaded joint end or a regular flexible shower hose to twist on for a coupling engagement, so that the showerhead water flow path for the said douche nozzle shares the same water flow path with the said barrel shape spray nozzle and that the spray pattern of the said barrel shape spray nozzle is unaffected when the said douche nozzle is not twisted onto the coupling structure on the showerhead face plate, thus resulting in a douche mode created on the showerhead.~~

3. ~~The showerhead douche mode as defined in claim 1 wherein the coupling engagement between the said spray nozzle and the said douche nozzle or the said douche hose may alternatively consist of~~

~~a douche nozzle with the annular external groove formed around the joint end that can be secured with a snap fit in the annular recessed cylindrical wall by a floating O-ring;~~

~~the said floating O-ring that is captivated in the bore of the annular recessed cylindrical wall by a retaining sleeve that defines a recess;~~

~~the snap fit feature which is effected by the said groove formed around the joint end of the disposable douche nozzle, so that the showerhead water flow path for the disposable vaginal douche nozzle shares the same water flow path with the said spray nozzle and that the spray pattern of the said spray nozzle is unaffected when a disposable and removable vaginal douche nozzle is not~~

~~snapped onto the coupling structure on the said showerhead face plate, thus resulting in a douche mode created on the showerhead.~~

2 (currently amended). A showerhead as in claim1, wherein one form of said engagement means in this invention comprises

a dam-shape spray nozzle nestled in a showerhead face plate;

an annular recessed internally threaded cylindrical wall around said dam-shape spray nozzle;

an annular clearance space between said dam-shape spray nozzle and said annular recessed internally threaded cylindrical wall to allow a douche nozzle or a douche hose with an externally threaded joint end cooperatively attachable to said threaded cylindrical wall, so that said douche nozzle or douche hose receives water from said dam-shape spray nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said dam-shape spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

3 (currently amended). A showerhead as in claim1, wherein another form of said engagement means in this invention comprises

an externally threaded barrel-shape spray nozzle nestled in a showerhead face plate;

an annular recessed smooth cylindrical wall around said externally threaded barrel-shape spray nozzle;

an annular clearance space between said externally threaded barrel-shape spray nozzle and said annular recessed smooth cylindrical wall to allow a douche nozzle or a douche hose with an internally threaded joint end cooperatively attachable to said externally threaded barrel-shape spray nozzle, so that said douche nozzle or douche hose receives water from said barrel-shape spray

nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said barrel-shape spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

4 (currently amended). A showerhead as in claim 1, wherein still another form of said engagement means in this invention comprises

a dam-shape spray nozzle nestled in a showerhead face plate;

an annular recessed cylindrical wall around said dam-shape spray nozzle;

a floating O-ring that is captivated in the bore of said annular recessed cylindrical wall by a retaining sleeve that defines a recess;

a douche nozzle or a flexible douche hose with an annular external groove formed around a joint end that can be secured with a snap-fit in the annular recessed cylindrical wall by said floating O-ring;

an annular clearance space between said dam-shape spray nozzle and said annular recessed cylindrical wall with a captivated floating O-ring to allow a douche nozzle or a douche hose with an annular external groove formed around a joint end cooperatively attachable to said floating O-ring,

of a douche nozzle or a flexible douche hose, so that said douche nozzle or douche hose receives water from said dam-shape spray nozzle when said douche mode is selected and said douche nozzle or hose is attached, and that the spray pattern of said spray nozzle is not affected when said douche nozzle or hose is not attached to the showerhead.

~~4. The showerhead douche mode as defined in claim 1 wherein the said douche nozzle comprises~~

~~a hollow tubular upper body, a hollow tubular lower body, and a joint end;~~

~~a joint end that has at least three versions of coupling structures: externally threaded configuration (screw-on type), internally threaded configuration (twist-on type), or groove configuration formed around the joint end (snap-fit type);~~

~~four recessed spaced apart grooves extending longitudinally on the exterior surface of the douche nozzle upper body;~~

~~four ridges with four spaced apart hemispherical bumps along longitudinal axis of each ridge between the said recessed spaced apart grooves on the exterior surface of the douche nozzle upper body;~~

~~a fixed or flexible obtuse angle between the douche nozzle upper body and douche nozzle lower body;~~

~~a plurality of apertures nestled within the said four recessed spaced apart grooves on the douche nozzle upper body;~~

~~the said apertures structured in diagonally downward cone shape having its reduced end towards the hollow fluid passageway and its enlarged end open to the exterior surface of the douche nozzle upper body;~~

~~the douche nozzle lower body that has smooth exterior surface and basically serves as a connecting tunnel between the joint end and the douche nozzle upper body.~~

5 (currently amended). A disposable vaginal douche nozzle as in claim 1,
wherein said douche nozzle comprises

a joint end, a hollow tubular lower body, a fixed or flexible obtuse angle, and a
hollow tubular upper body made of any suitable disposable material such as
plastic or the like;

said joint end that has at least three forms of coupling means as described
respectively in claims 2, 3 and 4: externally threaded configuration, internally
threaded configuration, or annular external groove configuration;

a fixed or flexible obtuse angle between the douche nozzle lower body and
douche nozzle upper body; wherein said flexible angle has spiral and bendable
structure that can be made of any suitable material, such as plastic or the like;

four recessed spaced-apart grooves extending longitudinally on the exterior
surface of the douche nozzle upper body;

four ridges with four spaced-apart hemispherical bumps along longitudinal axis of
each ridge between said recessed spaced-apart grooves on the exterior surface
of the douche nozzle upper body;

a plurality of apertures nestled within said four recessed spaced-apart grooves
on the douche nozzle upper body;

said apertures constructed in diagonally-downward cone-shape having its
reduced end towards the hollow fluid passageway and its enlarged end open to
the exterior surface of the douche nozzle upper body;

said douche nozzle lower body that has smooth exterior surface and basically
serves as a connecting tunnel between the joint end and the douche nozzle
upper body.